Political Cycles in

Greece's Municipal Employment

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Abstract

We consider the politically motivated fluctuations in Greece's municipal employment, constructing a dataset from primary data and focusing on the composition of municipal employment in terms of employment relationship forms. Our analysis produces strong evidence of pre-electoral manipulation through increases in the number of contract employees. Considering a number of control variables and robustness checks does not affect the key results. Such variables include whether mayors run for reelection, incumbents' political alignment with central government, partisan shifts, general elections, mayors' turnover rate, and timing patterns. Our evidence provides insights into Greece's political economy in the run-up to the current economic crisis.

Keywords: Political Cycles, Employment, Municipalities, Greece, Panel Data

JEL Classification: D72, H7, C23

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1. Introduction

The size of the public sector and clientelism feature prominently in the public debate over the potential causes of Greece's recent economic crisis. Weak institutions and reluctance to reform them provided a fertile environment for extended opportunistic policies and rent-seeking activities (Mitsopoulos Pelagidis, 2007; Pelagidis and Mitsopoulos, 2012). The emergence of electoral cycles in fiscal policies is one manifestation of such opportunistic behavior (Lockwood et al., 2001). Political budget cycles, however, may not be confined to central government politics and part of the literature attempts to identify opportunistic patterns at the local government level as well. For example, Veiga and Veiga (2007) provide evidence of political cycles in Portuguese municipalities, while Chortareas et. al. (2013) consider Greece's municipal budgetary decisions. Moreover, the empirical evidence suggests that budgetary cycles at the national level in developed countries are not as pronounced as in developing countries due to institutional constraints (Shi and Svensson, 2006; Klomp and De Haan, 2013). This paper considers the experience of Greek municipalities' hiring decisions shifting focus from budgetary to employment decisions. Pre-electoral manipulation of public hiring at the municipal level may be tempting for the incumbents since it involves far fewer restrictions as compared to employment at the central government level. The decision-making process is decentralized and the selection process is subject to less rigid rules, rendering the hiring decisions less visible and elusive to public scrutiny. The evidence on employment cycles at the local government level is in general scant. To our knowledge this is the first attempt to analyze the experience of Greece's municipalities. Greece is an advanced economy, but has nevertheless experienced long periods of political polarization and frequent

episodes of political instability during the last few decades and a profound economic crisis in the recent years.

The large number of public sector employees is broadly considered a key feature of the Greek economy that has contributed to the current crisis. The issue of contract workers in municipalities in particular has been a major area of debate in the run up to the 2004 general elections. The conservative party of "New Democracy" advocated the transformation of contract employees to permanent as long as they contributed to the core operations in each municipality. In the aftermath of the elections the working relationship of a large number of contract public sector employees, mainly in municipalities, changed to permanent, often after relevant court rulings. This move was latter perceived as characteristic of practices that led to Greece's fiscal derailment. This issue resurfaced in February of 2015 with a new twist, when the conservative minister who had introduced the related highly controversial legislation[1] was the surprise (single) candidate for the position of the President of the Hellenic Republic, proposed by the new coalition government of the radical left (SYRIZA) and the populist right ("Independent Greeks").

In this paper we construct a new dataset from primary sources, as the relevant data are not readily available. While the limited related literature typically focuses on the number of total employees,[2] our dataset allows us to additionally consider the composition of employment in terms of the nature of the employment relationship. Specifically, whether the local government employees fall in the category of permanent, contract or day-labor employees. Our results reveal strong evidence of electoral cycles especially in those employment relationships that permit incumbents

[1] Presidential Decree 64/2004.

[2] Coelcho et. al. (2006) consider employment across different activities (e.g. construction, transportation, social services, electricity) but not the permanent or temporary nature of employment contracts.

to build quasi-permanent ties with employees whose job depends upon perpetual contract renewals. The evidence we produce show that elections positively affect the total number of employees, a result that is mainly driven by increases in contract employees. These electoral effects appear robust when we consider a series of political controls regarding factors that might shape an incumbent's incentive and ability to adopt or not opportunistic policies prior to elections. We specifically focus on the effects of electoral competition, the incumbents' decision to run for another term, and the mayors' political alignment with the central government. We also examine how general elections affect municipal hiring and find that their effect is similar to that of municipal elections, a finding indicative of the close ties between central and local level politics in Greece. Our results contribute to the literature on political employment cycles at the municipal level by studying the previously unexplored dimension of the composition of municipal public hiring in terms of the form of the employment relationships, by investigating the interaction between central and local government politics, and by explicitly focusing on the effect that political competition has on the magnitude of the electoral effects. Moreover, our findings on incumbents' opportunistic behavior provide insights into Greece's political economy in the run-up to the current economic crisis.

The rest of the paper is organized as follows: The next section presents the related literature. Section 3 describes Greece's local government institutions, our newly constructed dataset, and the estimation strategy. Section 4 presents the results of our analysis and Section 5 concludes.

2. Related Literature

A number of empirical studies document the presence of opportunistically motivated politicians who manipulate economic policies to enhance their re-election prospects. Such electorally motivated cycles, mainly in government expenditures, have been identified by both single and multi-country studies. Recent evidence of electoral cycles in fiscal policies include Gonzalez (2002), Persson and Tabellini (2003), Brender and Drazen (2005), Shi and Svensson (2006), Potrafke (2012). Drazen (2001) and Haan and Klomp (2013) provide reviews of the literature.

A number of papers consider political cycles at the local level. Focusing on electoral cycles at the sub-national level allows for greater homogeneity in government structure and the institutional environment as well as in the available policy instruments (Veiga and Veiga (2007). It also allows for uniformity in electoral rules and dates (Sakurai and Menezes-Filho, 2011). Evidence of electoral cycles in local governments' policies have been documented for a number of countries. Galli and Rossi (2002) consider German federal states and show that expenditures increase during election years while Blais and Nadeau (1992) examine spending on social services and infrastructure construction for ten of Canada's provincial governments documenting similar electoral effects. Along the same lines Akhmedov and Zhuravskaya (2004) argue that opportunistic cycles can also be found in Russia's regional governor elections as their findings identify increased public spending before elections. Veiga and Veiga (2007) explicitly focus on municipal finances, producing evidence of electoral effects in Portuguese municipalities where elections negatively affect the budget balance. Likewise, Sakurai and Menezes-Filho (2011) document the presence of opportunistically induced cycles in Brazil's local finances, with increased

total and current expenditure before elections. Foucault et al. (2008) find similar opportunistic electoral effects in French municipalities as is also the case with Drazen and Eslava (2010) who consider Colombian municipalities and reveal electoral effects on the most visible expenditure components. Aidt et al. (2011) document that pre-electoral fiscal manipulation is larger when an incumbent is facing a tight race.

The potential of incumbents to influence various policy domains beyond the traditional domain of budgetary decision, motivates a shift in focus from cycles in local fiscal policies to political cycles in local public hiring. Indeed, unemployment is important for an incumbent's popularity (e.g., Feld and Kirchgässner, 2000; Lewis-Beck and Paldam, 2000) and opportunistically motivated politicians seem to acknowledge this fact (e.g., Mechtel and Potrafke, 2011). Only very recently have a limited number of empirical analyses of political cycles in local government employment emerged. Such concerns motivate Tepe and Vanhuysse (2009) who consider teachers' appointments in 16 German States documenting the presence of politically induced cycles in public employment as the hiring of new teachers accelerates during election periods. Their evidence, however, also suggests that the increases in hiring are to a large extent compensated through reductions that occur at other phases of the electoral cycle. Coelho et al. (2006) study politically motivated employment cycles in Portuguese municipalities. Their evidence shows that elections positively affect municipal employment in the cases where the incumbent's party has a majority in the municipal assembly or when the mayor is seeking re-election. In addition, they show that increases in local employment occur in those economic activities that are most visible by the electorate like construction works and community services. Similar results are documented by Dahlberg and Mörk (2011) who use data from municipalities in Finland and Sweden, verifying the existence of

political cycles in local public employment. They uncover increases in the number of employees during election years, which can be attributed to incumbents' opportunistic behavior seeking re-election.

As the relevant literature remains somewhat limited a number of questions arise with regard to political cycles in municipal employment. Focusing on the Greek case, an advanced economy with a long history of intense electoral competition and close ties between local and central government, we are able to investigate both the presence of opportunistically induced cycles in municipal employment and how the political framework and institutional environment affect their magnitude. Importantly, the structure of our dataset allows us to focus on how municipal elections affect the composition of employment in terms of the form of the employment relationships. This is the first study of political cycles in local government that explores the composition of employment. This can be an important aspect in the investigation of political cycles in public hiring to the extent that different constraints may apply for hiring under different employment categories allowing a more refined understanding of how opportunistically motivated politicians may exploit these differences.

3. Institutional Environment, Data and Empirical Strategy

3.1 Local Government's Institutions

Greece's municipalities constitute an ideal case for analyzing the effect of elections on public hiring as, in the absence of strong institutional constraints, incumbents are in effect provided with mandates that allow them to pursue opportunistic policies without checks and balances (Pelagidis, 2009). Municipal elections in Greece have been characterized by strong partisan divisions as the elected mayors in the majority of municipalities were supported by the two main parties (the right-wing New

Democracy and the left-wing PASOK). Up until 2010, municipal elections in Greece were held every four years in October with the winner being determined in a two round process. A reform act introduced in 2010 increased mayors' terms to five years. The electorate votes in favor of electoral lists, submitted by candidate mayors who are usually backed by political parties. The winning list receives the majority of the members in the municipal assembly and the office of the mayor who is the agenda setter and key political decision-maker in Greece's local politics. The municipalities follow uniform rules in their decision-making and have full control over the allocation of their resources. The key source of municipalities' financing is the central government's budget.

3.2 Data

To study for possible electoral effects on public hiring at the municipal level we construct a dataset consisting of 109 Greek municipalities that correspond to half of Greece's population as per the 2001 Census. To ensure institutional homogeneity and continuity in our dataset we focus only on those municipalities that were not affected by the municipal mergers introduced in the major administrative reform of 1997. The 1997 reform drastically reduced the total number of municipalities and increased their size in order to enhance administrative efficiency.

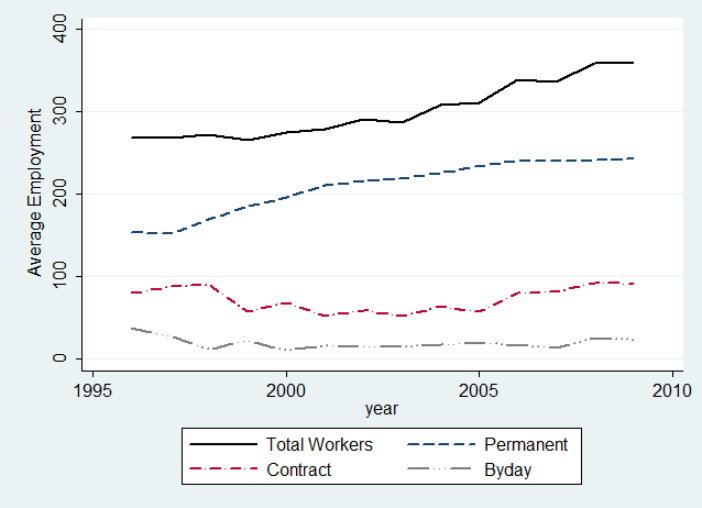
The time dimension of our panel is constrained by data availability. In particular, employment data are available from 1996 to 2009 and thus, the time span of our panel covers the municipal elections, held in 1998, 2002 and 2006. We retrieve data on Greece's municipal employment from the relevant publications provided by the *Hellenic Statistical Authority* (HSA). Data on employment are an integral part of the "*Municipalities and Communes Income–Expenditure*" annual reports since 1996.

These reports are publicly accessible from the Digital Library of the *Hellenic Statistical Authority*. The data, however, are available only in Greek and not in a time series format.

Municipal employment data provide information on the number of *Total Employees* and are disaggregated into three subcomponents that capture the employment relationship between municipalities and the employees, namely *Permanent*, *Contract* and *Day Labor Employees*. Among these three subcomponents, *Permanent Employees* constitute the larger part of *Total Employees,* followed by *Contract Employees,* while *Day Labor Employees* correspond to the smallest fragment of the total number of municipal employees.

Figure 1 presents the year average employment level of *Total Employees* and each one of its three subcomponents for the 109 municipalities included in our dataset, during the time span of our investigation. In Figure 2 we mean-center the averaged variables presented above and explicitly focus on *Permanent* and *Contract Employees* that correspond to the largest part of municipal employment. In Figure 2 a distinct cyclical pattern can be observed for the case of *Contract Employees.* This cyclical pattern is present during both general and municipal elections.

Figure 1 Average Employment.109 Municipalities: 1996-2009



Source: Hellenic Statistical Authority.

Figure 2 Average Employment (mean-centered): 1996-2009

The data cover 109 Municipalities during 1996-2009. Solid vertical lines correspond to municipal election years and dashed lines to general election years.
Source: Hellenic Statistical Authority.

3.3 Empirical model and estimation strategy

To test for the presence of politically induced cycles in municipal elections we estimate a typical political business cycles model of the following form:

$$y_{jit} = \beta_1 y_{jit-1} + \beta_2 y_{jit-2} + \gamma Elections_{it} + \delta \boldsymbol{X}_{it} + \eta_i + \varepsilon_t + u_{it} \quad (1)$$

where y_{jit} corresponds to each one the j employment variables used as dependent variable in municipality i and year t. The lagged dependent variable y_{jit-z}, with $z = 1, 2$, captures the persistence of the dependent variable (various employment categories). $Elections_{it}$ is a dummy variable that captures the electoral effect and the vector $\mathbf{x}_{it}$ contains a number of control variables. We denote the unobserved municipal-specific effects and the time-specific effects η_i and ε_t respectively, while u_{it} is an independent and identically distributed (*i.i.d.*) error term. The employment variables used in our analysis include the change in the total number of municipal employees (*ΔTotal Employees*) and its subcategories, permanent, contract and day labor employees (*ΔPermanent*, *ΔContract* and *ΔDay Labor employees*) that capture the different employment relationships. All employment variables are expressed as per 1000 residents.

We use a wide set of control variables to account for the economic, institutional, and political environment. The 2005 change in financial reporting standards renders the use of fiscal data at the municipal level non feasible. Thus we use the change in cyclical regional employment (*ΔRegEmployment*) as a proxy for the macroeconomic conditions in the country's regions. To control for the effect of municipal population size we follow Veiga and Veiga (2007) and construct a *Population Category* variable, by assigning the value 1 to the two largest cities, and the values of 2, 3, and 4 to cities with population over 40,000, 10,000-40,000, and less than 10,000 respectively. In addition to this categorical variable we consider directly the log population for robustness purposes. To capture the effects of the population's age structure in each municipality we consider the percentage of population below 15 years old and above 65 years old *(%Pop <15, % Pop>65*). We also use dummy variables to account for the possible presence of partisan/ideology effects. These variables (*left/right*) take the

value of one when the incumbent is elected with the support of a left or right wing political party respectively and zero otherwise. We include a linear time trend to control for the effects of the booming economy during the period under consideration.

To test if the emergence of political cycles is conditioned upon factors that affect an incumbent's motive for electioneering we allow elections to interact with dummy variables to capture electoral effects when the mayor is politically aligned with the ruling party or not (*Elections*PolAlignment*, *Elections*NotPolAlignment*), with dummies to control for mayors who may run for another term or not *(Elections*Recandidate* and *Elections*NotRecandidate*), and finally with dummies that capture the intensiveness of electoral competition. In particular, we account for the presence of swing voters, using the number of partisan shifts that occurred in each municipality in our sample during the three elections under consideration to develop a variable that distinguishes between *Swing* and *non-Swing* municipalities. In addition, we test how the turnover rate of mayors might affect the presence and size of electoral effects. We consider the number of different individuals having served as mayors since 1982 to distinguish between municipalities with low, medium, and high levels of mayor turnover rate. Finally, we investigate how general elections,the year before and the year after elections affect local employment using dummy variables that take the value of one in the corresponding years and zero otherwise.[3]

As equation (1) is a standard dynamic panel data specification, the presence of the lagged dependent variables and municipality specific effects renders the OLS estimator biased and inconsistent. Although the *Fixed-Effects* (FE) estimator eliminates the unit specific effects, it cannot eliminate the bias introduced by the

[3] Sections 4.2 and 4.3 discuss in more detail the interaction terms used in our analysis.

inclusion of the lagged dependent variables among the regressors. The order of the FE estimator bias is *1/T*, where *T* corresponds to the time length of the panel (see Nickell, 1981; Kiviet, 1995). Given that the time length of our panel is relatively short, the use of the FE estimator in the context of a dynamic model may give rise to a non-negligible bias. To address this possibility we employ the Blundell and Bond (1998) two-step system GMM estimator for dynamic panel data (see also, Shi and Svensson 2006; Veiga and Veiga 2007).[4] *We treat all institutional and political variable (i.e. elections, political alignment, re-candidate, swing, left right etc.) and all variables that capture the population structure (%Pop<15 and %Pop>65) as exogenous. In contrast we treat the level of regional employment as endogenous*.

4. Results

4.1 Baseline Results

Table 1 reports our baseline estimations, which provide strong evidence of a politically induced cycle in Greece's local employment. Results in Column (1) show that elections have a positive and significant effect on the number of municipal *Total Employees* as the coefficient on the *Elections* variable is positive and statistically significant at the 1% level. The results presented in Columns (2) to (4) suggest that this result is driven by election-year increases in the number of *Contract Employees* as the respective coefficient is positive and statistically significant at the 5% level. The estimates suggest that the annual change in the rate of municipal employees (*Total Employees* per 1,000 residents) increases by 1.281 in election years. The annual change in the rate of municipal employees on a contract basis (*Contract Employees* per 1,000 residents) also increases by 0.787. Such electoral effects,

[4] See notes in Table 1.

however, are not present for the population employed as "*Permanent*" and "*By Day Employees*". The absence of similar electoral effects on *Permanent Employees* indicates that political cycles in local employment emerge in the area where rules for hiring tend to be more flexible, subject to less public scrutiny, and possibly where an implicit promise of contract renewal conditional on the successful electoral outcome for the incumbent can be made. This finding is consistent with the view that incumbents who engage in electioneering prefer policy instruments that are easier to manipulate (Franzese and Jusko, 2006). We perform a number of diagnostic tests. In particular, the Hansen test validates the set of instruments used, the AR(1) test rejects the null hypothesis of no serial correlation while the AR(2) fails to reject the null hypothesis at conventional significance levels

With regard to the control variables, the results show that small-sized municipalities, whose operation tends to be less visible and under less public scrutiny when compared to large sized municipal entities, are associated with larger numbers of *Permanent Employees.* "Aged" municipalities, with a higher percentage of population over 65 years old, also have a greater number of *Permanent Employees*. On the other hand, partisan effects are generally absent, as almost all of the estimated coefficients on the partisanship/ideology variables *Left* and *Right* are not statistically significant with the exception of *Day Labor Employees* that is negatively associated with left-wing mayors. This results can be interpreted in terms of left-wing mayors' ideological aversion toward less secure ("exploitative") employment contracts.

4.2 Conditional Effects

The magnitude of the electoral effect may depend on various factors that affect an incumbent's incentive or ability to adopt opportunistic policies prior to elections so

we test for these. First we investigate how a mayors' decision to run for another term affects the magnitude of the political cycle. To test for possible differences in the magnitude of the electoral effect when a mayor is running for re-election or not we allow *Elections* to interact with *Recandidate* and *NotRecandidate* dummy variables. The former dummy takes the value of one when the mayor is a repeat candidate and zero otherwise while the latter is constructed similarly taking the value of one when the incumbent is not a repeat candidate and zero otherwise. We augment our baseline model with the two interaction terms *ELE*Recandidate* and *ELE*NotRecandidate* that capture elections where the mayor is a repeat candidate and not respectively. Results presented in Table 2, Columns (1) to (4) show that a political cycle is present both when the mayor is running for another term and when she is not. In line with our baseline findings, evidence suggests that political cycles are driven by increases in *Contract Employees*. To identify differences in the magnitude of the cycles between these two cases we test the hypothesis that the estimated coefficients on *ELE*Recandidate* and *ELE*NotRecandidate* for the case of *Contract Employees* are equal. A Wald test indicates that we cannot reject the null hypothesis that the impact of elections when the incumbent is a repeat candidate is equal to that when she is not. The same holds true when we test the same hypothesis for the coefficients obtained when *Total Employees* are the dependent variable. Our results contrast with the evidence Veiga and Veiga (2007) provide for municipalities in Portugal where electoral effects in municipal employment are present only when the incumbent runs for another term. One can interpret this difference as a result of political parties' strong presence in Greece's local politics, which ensures a form of continuity even when the incumbent is not seeking re-election. The results for the remaining variables entering the specification remain qualitatively the same as in Table 1.

Since local politics in Greece are tightly associated with national politics, we specifically study how a mayor's political alignment with the governing party[5] may affect the magnitude of the electoral effects on municipal employment. As before we allow *Elections* to interact with *PolAlignment* and *NotPolAlignment.* The former dummy equals one if a mayor was elected with the ruling party's support and zero otherwise. The latter dummy takes the value of one if a mayor was not elected with the ruling party's support and zero otherwise. The *ELE* PolAlignment* term captures elections where the mayor is aligned to central government and the *ELE* NotPolAlignment* term captures elections where the mayor is not aligned to central government. Although one would expect larger electoral effects when the incumbent shares the same party affiliation with the government as he enjoys increased ability for pre-electoral manipulation results presented in Columns (5) to (8) in Table 2 suggest that this is not the case. Political cycles in local employment are present and of similar size both when the incumbent is aligned with central government and when he is not.[6] As before, the rest of the estimated coefficients remain qualitatively the same.

Another factor that might affect the size of the electoral effect is the presence of swing voters as incumbents may have greater incentives to pursue opportunistic policies before elections in municipalities where a clear partisan majority is absent. To test how this may affect the size of political cycle we distinguish between "swing" and "non-swing" municipalities. Similarly to Drazen and Eslava (2010) we characterize municipalities as such according to the number of partisan shifts that

[5] For the whole time dimension of our panel Greece was ruled by single party governments.

[6] A Wald test does not reject the hypothesis that the estimated coefficients on *ELE*PolAlignment* and *ELE*NotPolAlignment* are equal. This result is similar for the coefficients obtained when *Total Employees* and *Permanent Employees* are used as the dependent variables. When we include the variable *PolAlignment* as a separate control in the model the estimated coefficient is not significant while all other coefficients remain the same as in Columns (5) to (8).

occurred in the three elections included in our sample. We classify a municipality as "swing" if it has experienced two partisan shifts[7] in the elections included in our sample and as "non-swing" if it has experience one or zero partisan shifts. We create two dummy variables that correspond to each one of these categories with *Swing* taking the value of one for those municipalities characterized as "swing" and zero otherwise. Similarly, *NonSwing* takes the value of one for those municipalities characterized as "non-swing" and zero otherwise. Again we allow *Elections* to interact with these two dummies to capture the relevant effects. One would expect electoral effects to be more pronounced in swing municipalities as electoral competition is more intense and mayorships switch more often. Results presented in Table 3, Columns (1) to (4) suggest that electoral effects are present both in swing and non-swing municipalities and they are of the same magnitude.[8]

4.3 Robustness Tests

As a further robustness check to electoral competition effects, in addition to partisan shifts, we consider the number of individuals having served as mayors for each municipality. A high turnover rate of mayors may indicate high levels of political competition while a low turnover rate may indicate that local politics are dominated by few individuals. We use the number of different individuals having served as mayors since 1982 to categorize each municipality in our sample according to mayors turnover rate. Municipalities within one standard deviation from the sample mean, for the number of different mayors, fall into the *Medium Turnover* category while the rest are categorized either as *Low* or *High Turnover* municipalities,

[7] The variable *Swing* corresponds to partisan shifts and not in mayor changes as a right wing mayor can be succeeded by another one with the same affiliation in the case where the former mayor in no longer a candidate.

[8] A Wald test does not reject the hypothesis that the estimated coefficients are equal.

respectively. We construct three dummy variables that denote a *Low*, *Medium,* or *High Turnover* municipality and we allow *Elections* to interact with these three dummies. The results presented in Table 4, columns (5) to (8), show that political cycles emerge irrespectively of the level of mayor's turnover as when we distinguish between 'swing' and 'non-swing' municipalities. Once again, we cannot reject the hypothesis that the electoral effect is the same in *Low* and *Medium* turnover municipalities. Likewise, we cannot reject the hypothesis that the electoral effect is the same in *High* and *Medium* turnover municipalities.

To consider whether public hiring increases emerge only during election years we include a dummy that captures the year before elections as some policies may take time to be implemented. As the results in Table 4, Columns (1) to (4), show the *Year Before Elections* variable has a positive effect on municipal employment following a similar pattern with the *Elections* variable. A Wald test, however, suggests that the size of this effect is smaller than that the effect of *Elections* on public hiring. *The results show that the impact of elections on the annual change in the rate of municipal employees (Total Employees per 1,000 residents) is more than twice that of the year before elections as the estimated coefficients suggest an increase in the dependent variable of 0.552 in the year before elections compared to 1.281 in the election year.*

As local politics in Greece are closely associated to national politics, and political parties have a strong presence at the level of local governments, we test how general elections affect municipal employment. The results in Columns (5) to (8) suggest that *General Elections* also have a positive effect on municipal employment, corroborating a visible pattern revealed by casual inspection of Figure 2.

In addition to testing whether the year before elections affects our dependent variables, we introduce an additional dummy to capture possible post electoral effects.

This "*Year after Elections*" dummy takes the value of one in the year after elections and zero otherwise. The finding presented in Table 5 Columns 1-4, suggest that positive post-electoral effects are present and statistically significant. These effects pertain to the same employment categories as the ones presented in the baseline specification. Yet, as a Wald test suggests, the effect of the "*Year after Elections*"on *Total Employment* is of smaller magnitude as compared to the effect during the election year. In particular, our results show that in the year after elections the annual change in the rate of municipal employees (*Total Employees* per 1,000 residents) and municipal employees on a contract basis (*Contract Employees* per 1,000 residents) increases by 0.831 and 0.696 respectively. Thus, our evidence suggests an eroding process, as after elections the hiring process is not reversed but continues, albeit at a slower pace.

We further test the robustness of our results by using log employment as the dependent variable instead of *ΔEmployment*. The results are consistent with those of the baseline specification as Columns 5-8 in Table 5 show, except when the log of "*By Day Employees*" is used as the dependent variable, where the AR(1) test fails to reject the null hypothesis

When we replace our categorical population variable (*PopCat*) variable with the log of the population (variable "*log Total Population*") the results are consistent with those that emerge from the baseline specification. In particular, when we use the log of population variable the results show that an increasing population negatively affects employment which corroborates the baseline finding that a smaller population, as captured by the categorical population variable (*Popcat*) has a positive effect on employment.

Finally, we test the robustness of our results by excluding the small sized municipalities, specifically municipalities with less than 10,000 citizens (*Population Category* 4). The results remain qualitatively the same.

5. Conclusion

We consider the presence of political cycles in Greek municipal employment across various categories of employment (permanent, temporary/contract and day-labor employees), contributing to a rather small literature on the opportunistically induced cycles in public hiring at the municipal government level. Our results provide support to the opportunistic cycle hypothesis, as elections positively affect the number of municipal employees. Furthermore, our evidence suggests that while the electoral effect is manifested by increases in the number of the T*otal Employees,* it is mainly driven by increases of C*ontract Employees*. That is, political cycles in local employment affect the composition of employment in terms of the form of the employment relationships. A similar opportunistic cycle in municipal employment emerges with respect to the general elections, a finding that is indicative of the close ties between central and local government politics in Greece. The above findings emerge regardless of whether the mayors run for reelection and regardless of whether incumbents are politically aligned with the central government. Also intense electoral competition does not affect the size of the opportunistic effects that are present in municipalities that swing often. Our findings provide explicit evidence of incumbents' opportunistic behavior in Greece's municipalities manifested mainly through the

hiring of contract employees. This characterization of the nexus between politicians and voters, as well as the subsequent clientelistic practices, can be considered as important contributing factor to Greece's fiscal derailment and overall current economic predicament. Further research in this area could possibly explore employment in the local development corporations, and the distribution of employment across industries/firms.

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Tables

Table 1: Political Cycles in Local Employment. Baseline Findings.

	(1)	(2)	(3)	(4)
VARIABLES	**ΔTotal Employees**	**ΔPermanent Employees**	**ΔContract Employees**	**ΔDay Labor Employees**
Linear Time Trend	0.0175	-0.000720	-0.00414	0.0222
	(0.0686)	(0.0449)	(0.0421)	(0.0332)
ΔRegEmployment	-0.0875	0.0489	-0.133	0.0235
	(0.138)	(0.0722)	(0.115)	(0.0779)
Elections	1.281***	0.213	0.787**	0.113
	(0.331)	(0.373)	(0.333)	(0.243)
Left	-0.129	0.0287	-0.0193	-0.145*
	(0.134)	(0.0556)	(0.109)	(0.0823)
Right	-0.0470	-0.0455	-0.0739	0.0343
	(0.164)	(0.0660)	(0.112)	(0.103)
Population Category	0.172**	0.0921**	-0.0108	0.0189
	(0.0862)	(0.0389)	(0.0507)	(0.0309)
% Pop<15	-8.355*	-4.250	-3.486	-1.243
	(4.669)	(3.091)	(2.947)	(2.104)
% Pop>65%	1.307	2.514*	1.243	-0.584
	(3.086)	(1.453)	(1.428)	(1.574)
$(\text{Lagged Dependent Variable})_{t-1}$	-0.313***	-0.236**	-0.406***	-0.397***
	(0.0968)	(0.101)	(0.0864)	(0.0486)
$(\text{Lagged Dependent Variable})_{t-2}$	-0.259***	-0.0865*	-0.119*	-0.116***
	(0.0955)	(0.0519)	(0.0610)	(0.0380)
AR(1)[a]	0.005	0.006	0.012	0.029
AR(2)[a]	0.326	0.498	0.962	0.677
Hansen Test[b]	0.147	0.147	0.618	0.656
No of Instruments	30	30	30	30
Observations	869	869	869	869
No of Municipalities	109	109	109	109

Notes: Robust standard errors in parenthesis with finite-sample correction for the two step covariance matrix as developed by Windmeijer (2005), ***, **, * denote significance at the 1, 5, 10 percent level. Time fixed effects are generally insignificant and are not reported to economize on space.

[a] Arellano-Bond test for first-order and second-order serial correlation in the first-differenced residuals, H0: No serial correlation.

[b]Hansen test for over-identifying restrictions. The null hypothesis corresponds to valid over-identifying restrictions.

Table 2: Political Cycles in Local Employment.

VARIABLES	(1) ΔTotal Employees	(2) ΔPermanent Employees	(3) ΔContract Employees	(4) ΔDay Labor Employees	(5) ΔTotal Employees	(6) ΔPermanent Employees	(7) ΔContract Employees	(8) ΔDay Labor Employees
Linear Time Trend	0.0164	-0.00665	-0.00196	0.0231	0.0153	4.57e-05	-0.00412	0.0226
	(0.0690)	(0.0449)	(0.0419)	(0.0332)	(0.0703)	(0.0450)	(0.0425)	(0.0330)
ΔRegEmployment	-0.0897	0.0401	-0.131	0.0210	-0.0828	0.0477	-0.134	0.0235
	(0.137)	(0.0770)	(0.114)	(0.0795)	(0.136)	(0.0720)	(0.112)	(0.0765)
Elections*ReCandidate	1.265***	0.183	0.815**	0.108				
	(0.350)	(0.374)	(0.336)	(0.246)				
Elections*NotReCandidate	1.361***	0.360	0.636*	0.189				
	(0.348)	(0.381)	(0.343)	(0.274)				
Elections*PolAlignment					1.212***	0.180	0.899**	0.0894
					(0.346)	(0.340)	(0.351)	(0.258)
Elections*NotPolAlignment					1.350***	0.254	0.749**	0.131
					(0.343)	(0.354)	(0.318)	(0.240)
PolAlignment					0.0740	0.0103	0.0483	-0.00822
					(0.111)	(0.0570)	(0.0818)	(0.0793)
Left	-0.129	0.0349	-0.0200	-0.149*	-0.162	0.0302	-0.0671	-0.138
	(0.134)	(0.0563)	(0.109)	(0.0826)	(0.159)	(0.0557)	(0.131)	(0.106)
Right	-0.0434	-0.0374	-0.0770	0.0313	-0.0875	-0.0407	-0.118	0.0394
	(0.165)	(0.0671)	(0.112)	(0.104)	(0.197)	(0.0795)	(0.130)	(0.127)
Population Category	0.174**	0.0961**	-0.0138	0.0206	0.166*	0.0910**	-0.00998	0.0187
	(0.0878)	(0.0390)	(0.0519)	(0.0310)	(0.0868)	(0.0384)	(0.0493)	(0.0304)
% Pop<15	-8.343*	-3.992	-3.496	-1.311	-8.294*	-4.264	-3.529	-1.254
	(4.719)	(3.034)	(2.987)	(2.127)	(4.785)	(3.106)	(2.929)	(2.106)
% Pop>65%	1.336	2.631*	1.147	-0.646	1.270	2.379	1.308	-0.622
	(3.042)	(1.461)	(1.430)	(1.578)	(3.267)	(1.552)	(1.402)	(1.573)
(Lagged Dependent Variable)$_{t-1}$	-0.314***	-0.241**	-0.404***	-0.398***	-0.304***	-0.234**	-0.405***	-0.397***
	(0.0985)	(0.0984)	(0.0866)	(0.0488)	(0.0972)	(0.101)	(0.0861)	(0.0485)
(Lagged Dependent Variable)$_{t-2}$	-0.259***	-0.0846	-0.120**	-0.116***	-0.261***	-0.0849*	-0.119*	-0.117***
	(0.0950)	(0.0518)	(0.0609)	(0.0376)	(0.0953)	(0.0510)	(0.0612)	(0.0388)
AR(1)	0.005	0.006	0.011	0.029	0.003	0.006	0.011	0.024
AR(2)	0.330	0.525	0.942	0.664	0.085	0.500	0.230	0.202
Hansen Test	0.149	0.159	0.581	0.668	0.174	0.163	0.566	0.324
Sign. Test (p-values) (Ho: Equality of estimated coefficients for interaction terms)	0.725	0.054	0.233	0.495	0.505	0.407	0.316	0.748
No of Instruments	31	31	31	31	32	32	32	32
Observations	869	869	869	869	869	869	869	869
No of Municipalities	109	109	109	109	109	109	109	109

Notes: See Table 1

Table 3: Political Cycles in Local Employment.

VARIABLES	(1) ΔTotal Employees	(2) ΔPermanent Employees	(3) ΔContract Employees	(4) ΔDay Labor Employees	(5) ΔTotal Employees	(6) ΔPermanent Employees	(7) ΔContract Employees	(8) ΔDay Labor Employees
Linear Time Trend	0.0336	-0.00170	0.00815	0.0240	0.0260	-0.000883	-0.00395	0.0214
	(0.0703)	(0.0455)	(0.0420)	(0.0336)	(0.0658)	(0.0443)	(0.0423)	(0.0334)
ΔRegEmployment	-0.0927	0.0506	-0.141	0.0239	-0.0879	0.0519	-0.132	0.0235
	(0.138)	(0.0690)	(0.117)	(0.0767)	(0.139)	(0.0734)	(0.115)	(0.0773)
Elections*Swing	1.175***	0.113	0.889**	0.172				
	(0.389)	(0.381)	(0.379)	(0.250)				
Elections*NotSwing	1.368***	0.274	0.797**	0.0824				
	(0.334)	(0.381)	(0.330)	(0.246)				
Swing	0.192	0.0430	0.0930	-0.00367				
	(0.124)	(0.0555)	(0.0635)	(0.0489)				
Elections*LowTurnover					1.355***	0.234	0.973**	0.113
					(0.408)	(0.388)	(0.434)	(0.265)
Elections*MediumTurnover					1.323***	0.195	0.769**	0.132
					(0.343)	(0.374)	(0.340)	(0.256)
Elections*HighTurnover					1.111***	0.256	0.682*	0.0959
					(0.393)	(0.372)	(0.381)	(0.227)
Left	-0.115	0.0287	-0.00450	-0.140*	-0.131	0.0295	-0.0302	-0.151*
	(0.134)	(0.0551)	(0.107)	(0.0819)	(0.132)	(0.0554)	(0.110)	(0.0823)
Right	-0.0594	-0.0434	-0.0771	0.0382	-0.0508	-0.0456	-0.0772	0.0310
	(0.165)	(0.0666)	(0.112)	(0.103)	(0.166)	(0.0659)	(0.113)	(0.103)
Population Category	0.179**	0.0923**	-0.00898	0.0198	0.173**	0.0935**	-0.0183	0.0185
	(0.0852)	(0.0387)	(0.0481)	(0.0310)	(0.0828)	(0.0392)	(0.0526)	(0.0305)
% Pop<15	-9.136*	-4.237	-4.022	-1.272	-8.958*	-4.239	-3.412	-1.126
	(4.716)	(3.122)	(2.865)	(2.116)	(4.646)	(3.054)	(3.002)	(2.108)
% Pop>65%	0.341	2.473*	0.421	-0.729	1.198	2.489*	1.281	-0.624
	(3.063)	(1.437)	(1.538)	(1.606)	(2.937)	(1.492)	(1.424)	(1.561)
(Lagged Dependent Variable)$_{t-1}$	-0.316***	-0.242**	-0.408***	-0.398***	-0.316***	-0.235**	-0.402***	-0.397***
	(0.0949)	(0.100)	(0.0861)	(0.0483)	(0.0913)	(0.101)	(0.0848)	(0.0483)
(Lagged Dependent Variable)$_{t-2}$	-0.260***	-0.0847	-0.118*	-0.117***	-0.259***	-0.0875*	-0.117*	-0.115***
	(0.0954)	(0.0517)	(0.0607)	(0.0382)	(0.0941)	(0.0507)	(0.0620)	(0.0385)
AR(1)	0.005	0.007	0.012	0.028	0.004	0.006	0.013	0.027
AR(2)	0.344	0.540	0.974	0.685	0.328	0.478	0.996	0.664
Hansen Test	0.149	0.131	0.649	0.672	0.154	0.154	0.543	0.663
Sign Test (p-value) (Ho: Equality of interaction terms estimated coefficients)	0.401	0.072	0.509	0.365				
Sign Test (p-value) (Ho: Low Turnover effect=Medium Turnover effect)					0.886	0.715	0.413	0.869
Sign Test (p-value) (Ho: Medium Turnover effect=High Turnover effect)					0.507	0.357	0.618	0.725
No of Instruments	32	32	32	32	32	32	32	32
Observations	869	869	869	869	869	869	869	869
No of Municipalities	109	109	109	109	109	109	109	109

Notes: See Table 1

Table 4: Political Cycles in Local Employment.

VARIABLES	(1) ΔTotal Employees	(2) ΔPermanent Employees	(3) ΔContract Employees	(4) ΔDay Labor Employees	(5) ΔTotal Employees	(6) ΔPermanent Employees	(7) ΔContract Employees	(8) ΔDay Labor Employees
Linear Time Trend	0.0175	-0.000720	-0.00414	0.0222	-0.398***	-0.0314	-0.352***	0.0237
	(0.0686)	(0.0449)	(0.0421)	(0.0332)	(0.129)	(0.212)	(0.126)	(0.0759)
ΔRegEmployment	-0.0875	0.0489	-0.133	0.0235	-0.0875	0.0489	-0.133	0.0235
	(0.138)	(0.0722)	(0.115)	(0.0779)	(0.138)	(0.0722)	(0.115)	(0.0779)
YearBeforeElections	0.552*	0.0843	0.461*	0.0230				
	(0.327)	(0.346)	(0.277)	(0.228)				
Elections	1.281***	0.213	0.787**	0.113	5.853***	0.550	4.614***	0.0944
	(0.331)	(0.373)	(0.333)	(0.243)	(1.731)	(2.464)	(1.681)	(1.132)
General Elections					5.818***	0.429	4.870***	-0.0233
					(1.847)	(2.667)	(1.742)	(1.156)
Left	-0.129	0.0287	-0.0193	-0.145*	-0.129	0.0287	-0.0193	-0.145*
	(0.134)	(0.0556)	(0.109)	(0.0823)	(0.134)	(0.0556)	(0.109)	(0.0823)
Right	-0.0470	-0.0455	-0.0739	0.0343	-0.0470	-0.0455	-0.0739	0.0342
	(0.164)	(0.0660)	(0.112)	(0.103)	(0.164)	(0.0660)	(0.112)	(0.103)
Population Category	0.172**	0.0921**	-0.0108	0.0189	0.172**	0.0921**	-0.0108	0.0189
	(0.0862)	(0.0389)	(0.0507)	(0.0309)	(0.0862)	(0.0389)	(0.0507)	(0.0309)
% Pop<15	-8.355*	-4.250	-3.486	-1.243	-8.355*	-4.250	-3.486	-1.234
	(4.669)	(3.091)	(2.947)	(2.104)	(4.669)	(3.091)	(2.947)	(2.104)
% Pop>65%	1.307	2.514*	1.243	-0.584	1.307	2.514*	1.243	-0.578
	(3.086)	(1.453)	(1.428)	(1.574)	(3.086)	(1.453)	(1.428)	(1.574)
$(\text{Lagged Dependent Variable})_{t-1}$	-0.313***	-0.236**	-0.406***	-0.397***	-0.313***	-0.236**	-0.406***	-0.397***
	(0.0968)	(0.101)	(0.0864)	(0.0486)	(0.0968)	(0.101)	(0.0864)	(0.0486)
$(\text{Lagged Dependent Variable})_{t-2}$	-0.259***	-0.0865*	-0.119*	-0.116***	-0.259***	-0.0865*	-0.119*	-0.116***
	(0.0955)	(0.0519)	(0.0610)	(0.0380)	(0.0955)	(0.0519)	(0.0610)	(0.0380)
AR(1)	0.004	0.006	0.011	0.023	0.005	0.006	0.012	0.029
AR(2)	0.081	0.498	0.238	0.198	0.326	0.498	0.962	0.677
Hansen Test	0.166	0.147	0.563	0.328	0.147	0.147	0.618	0.656
Sign. Test (p-values) (Ho: YearBeforeElections=Elections)	0.000	0.104	0.023	0.341				
Sign. Test (p-values) (Ho: Elections=General Elections)					0.782	0.570	0.072	0.295
No of Instruments	30	30	30	30	30	30	30	30
Observations	869	869	869	869	869	869	869	869
No of Municipalities	109	109	109	109	109	109	109	109

Notes: See Table 1

Table 5: Political Cycles in Local Employment.

VARIABLES	(1) ΔTotal Employees	(2) ΔPermanent Employees	(3) ΔContract Employees	(4) ΔDay Labor Employees	(5) LogTotal Employees	(6) LogPermanent Employees	(7) LogContract Employees	(8) LogDay Labor Employees
Linear Time Trend	0.0175	0.0104	-0.00414	0.0211	0.601***	0.0681	1.131**	1.061
	(0.0686)	(0.0429)	(0.0421)	(0.0330)	(0.195)	(0.131)	(0.450)	(0.719)
ΔRegEmployment	-0.0875	0.0526	-0.133	0.0235				
	(0.138)	(0.0728)	(0.115)	(0.0777)				
LogRegEmployment					-0.0350	-0.0102	-0.233**	-0.167
					(0.0232)	(0.0237)	(0.110)	(0.128)
Elections	1.281***	0.108	0.787**	0.110	1.875***	0.272	3.119**	1.021
	(0.331)	(0.441)	(0.333)	(0.245)	(0.558)	(0.391)	(1.252)	(0.842)
Year After Elections	0.831***	-0.0579	0.696***	-0.00498				
	(0.264)	(0.452)	(0.249)	(0.165)				
Left	-0.129	0.0289	-0.0193	-0.145*	0.000592	-0.00391	-0.0451	-0.187
	(0.134)	(0.0558)	(0.109)	(0.0823)	(0.0499)	(0.0140)	(0.0685)	(0.235)
Right	-0.0470	-0.0460	-0.0739	0.0337	0.0755	-0.0152	0.0104	0.301
	(0.164)	(0.0662)	(0.112)	(0.103)	(0.0593)	(0.0172)	(0.0793)	(0.305)
Population Category	0.172**	0.0922**	-0.0108	0.0191	-0.696**	-0.0472	-0.452***	-0.604***
	(0.0862)	(0.0391)	(0.0507)	(0.0309)	(0.312)	(0.0967)	(0.0943)	(0.206)
% Pop<15	-8.355*	-4.380	-3.486	-1.179	-1.405	-0.0908	3.177	12.00
	(4.669)	(3.197)	(2.947)	(2.107)	(3.187)	(0.640)	(5.160)	(7.845)
% Pop>65%	1.307	2.511	1.243	-0.544	-6.369*	0.0715	4.111	-5.110
	(3.086)	(1.565)	(1.428)	(1.576)	(3.498)	(0.686)	(5.889)	(5.580)
(Lagged Dependent Variable)$_{t-1}$	-0.313***	-0.234**	-0.406***	-0.397***	0.290	0.755***	0.415***	0.526***
	(0.0968)	(0.102)	(0.0864)	(0.0486)	(0.207)	(0.0795)	(0.0568)	(0.141)
(Lagged Dependent Variable)$_{t-2}$	-0.259***	-0.0888*	-0.119*	-0.116***	0.0922	0.198***	0.163***	-0.131
	(0.0955)	(0.0519)	(0.0610)	(0.0380)	(0.0719)	(0.0499)	(0.0501)	(0.0843)
AR(1)	0.004	0.006	0.011	0.023	0.013	0.000	0.000	0.090
AR(2)	0.081	0.474	0.238	0.198	0.896	0.904	0.174	0.374
Hansen Test	0.166	0.130	0.563	0.328	0.958	0.235	0.772	0.229
Sign. Test (p-values) (Ho: YearAfterElections=Elections)	0.020	0.012	0.514	0.347				
Sign. Test (p-values) (Ho: Elections=General Elections)								
No of Instruments	30	30	30	30	30	30	30	30
Observations	869	869	869	869	971	971	971	971
No of Municipalities	109	109	109	109	109	109	109	109

Notes: See Table 1

Table 6: Political Cycles in Local Employment. LogTotalPop

	(1)	(2)	(3)	(4)
VARIABLES	**ΔTotal Employees**	**ΔPermanent Employees**	**ΔContract Employees**	**ΔDay Labor Employees**
Linear Time Trend	0.152*	0.0619	-0.0230	0.0357
	(0.0858)	(0.0558)	(0.0592)	(0.0368)
ΔRegEmployment	-0.0894	0.0479	-0.134	0.0237
	(0.139)	(0.0728)	(0.116)	(0.0785)
Elections	1.659***	0.412	0.734**	0.153
	(0.366)	(0.407)	(0.357)	(0.239)
Left	-0.124	0.0285	-0.0223	-0.145*
	(0.135)	(0.0568)	(0.106)	(0.0853)
Right	-0.0465	-0.0437	-0.0774	0.0347
	(0.163)	(0.0677)	(0.111)	(0.108)
LogTotalPopulation	-0.124*	-0.0587*	0.0150	-0.0118
	(0.0663)	(0.0306)	(0.0362)	(0.0237)
% Pop<15	-8.968*	-4.375	-3.082	-1.299
	(4.845)	(3.160)	(3.097)	(2.095)
% Pop>65%	1.126	2.412	1.372	-0.637
	(3.095)	(1.568)	(1.432)	(1.493)
(Lagged Dependent Variable)$_{t-1}$	-0.315***	-0.238**	-0.406***	-0.397***
	(0.0965)	(0.104)	(0.0867)	(0.0486)
(Lagged Dependent Variable)$_{t-2}$	-0.261***	-0.0848	-0.119*	-0.116***
	(0.0962)	(0.0521)	(0.0613)	(0.0381)
AR(1)[a]	0.005	0.008	0.012	0.028
AR(2)[a]	0.326	0.528	0.962	0.677
Hansen Test[b]	0.147	0.141	0.617	0.654
No of Instruments	30	30	30	30
Observations	869	869	869	869
No of Municipalities	109	109	109	109

Notes: See Table 1